

MONTHLY WEATHER REVIEW.

VOL. XIV.

WASHINGTON CITY, MARCH, 1886.

No. 3.

INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during March, 1886, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic Ocean during the month are also given, and their approximate paths shown on chart i. In tracing the centres of the paths of these storms data from the reports of one hundred and eighty-four vessels have been used.

The most noteworthy feature of the month on the north Atlantic was the remarkable continuation of low pressures; barometer readings below 29.0 were reported on thirteen days.

The general deficiency in the mean atmospheric pressure for March forms a noteworthy feature in the meteorology of the month, there being but one station in the United States where an excess over the normal is shown, viz., Red Bluff, California, .02 inch. There are two comparatively small areas where the pressure is normal—one in California and the other in South Carolina. In all other districts the pressure is below the normal; the deficiencies, however, are not marked, and are remarkably even over the entire country; the departures nowhere exceed .08 inch.

On chart i the centres of the paths of fifteen areas of low pressure, traced over the United States, are shown, this number exceeding by three the average for March during the last twelve years. Ten depressions are traced over the Atlantic.

The mean temperature is below the normal on the Pacific coast, in the Rocky Mountain districts, Missouri Valley, and in the Southern States; it is above the normal in the extreme northwest, upper lake region, and in Nova Scotia. The regions of maximum departure from the normal are the middle and southern plateau districts and the extreme northwest, the temperature averaging 3°.1 above the normal in the last-named district, and about 5° below the normal in the plateau districts.

The precipitation is largely in excess of the average in Florida, the east Gulf states, and in eastern Tennessee; quite a marked deficiency occurs in the lower Ohio valley, western Tennessee, and in portions of the central Mississippi valley. In other districts the departures from the normal precipitation are not unusual.

The very heavy rains during the closing days of the month in the Southern States resulted in damaging freshets in that section; the floods had not reached their maximum height at the end of the month.

As in the preceding month, a chart (number v) has been prepared, showing, for selected stations, the oscillations of atmospheric pressure and temperature during the month as noted at the tri-daily telegraphic observations.

The Chief Signal Officer has received from the Rev. J. E. Terberg, voluntary observer, Pekin, Tazewell county, Illinois, a series of interesting charts illustrating the atmospheric pressure, temperature, and other meteorological phenomena for March, 1886, at that place. Of the charts referred to, four are presented in this REVIEW, and will be found on the back of chart v; they exhibit (first) the mean temperature and "sun-heat," (second) the range of temperature, (third) the mean relative humidity, (fourth) the direction and force of the wind. In the plate representing wind data the Arabic numerals refer to dates; the Roman numerals indicate the force (scale not stated) of the wind; and the signs: •, —, +, indicate the hours of observation, viz., 7 a. m., 2 and 9 p. m., respectively.

In the preparation of this REVIEW the following data, received up to April 20, 1886, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and thirty-three Signal Service stations and twenty-two Canadian stations, as telegraphed to this office; one hundred and forty-six monthly journals and one hundred and sixty-four monthly means from the former, and twenty-two monthly means from the latter; three hundred and ten monthly registers from voluntary observers; sixty-one monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the New England Meteorological Society, and from the local weather services of Alabama, Illinois, Indiana, Minnesota, Missouri, Nebraska, Ohio, and Tennessee, and of the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE.

[Expressed in inches and hundredths.]

The mean atmospheric pressure for March, 1886, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii.

The mean pressure is greatest over the northern and central Rocky Mountain districts, and, as in the preceding month, it is least over the Canadian Maritime Provinces. Throughout the entire country the barometric means range from 29.73 to 30.15, the highest being reported from Montrose, Colorado, and the lowest from Sydney, Nova Scotia. Along the Pacific coast and in the Southern States, except in southern Texas, the mean pressures slightly exceed 30.0.

As compared with the mean pressure for the preceding month, a decrease is shown throughout the United States, except at Los Angeles and San Diego, California; at the former station no change occurs, and at the latter the mean pressure is .02 higher than for February. Over the greater part of the country the decrease exceeds .10, and over the central and southern Rocky Mountain districts it amounts to .20.

The departures from the normal pressure at the various Sig-